

suggested in the case of *Stuhlmannia*\* that the thickened plug-like end of the spermatophore is derived from the spermiducal glands of the other worm. I think that in the present case a similar explanation may be applicable, and that this substance may be either a product of the spermiducal glands or a mucoid secretion of the skin of the clitellar region, and that it may serve a useful purpose in retaining the recently-injected sperm within the spermatheca, until it is stored in the special pockets provided for it, and also as a plug for the completed spermatophore.

My thanks are due to my friend and colleague, Dr. W. T. Calman, for some useful suggestions and criticisms while working at the subject of this paper.

LVI.—*List of Mammals (exclusive of Ungulata) collected on the Upper Congo by Dr. Christy for the Congo Museum, Tervueren.* By OLDFIELD THOMAS, F.R.S.

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In the 'Annals' for last August † I published a few of the more striking novelties from the fine series of Mammalia brought home from the Congo by Dr. Cuthbert Christy, who had been employed by the Congo Museum to make a collection for them on the Ituri and Welle, and, by request of the Belgian authorities, I now give a list of all the species obtained by him, with the exception of the Ungulates.

Such a list is always valuable for zoo-geographical reasons, and Dr. Christy's fine collection so supplements those made in the same region by Emin Pasha, the Alexander-Gosling Expedition, and the members of the Ruwenzori Expedition, as to make the complete list a very long one.

In a general way, there is a great uniformity in the Mammal life from the Cameroons to Uganda, as might be expected from the uniform nature of the country, but in a few cases there is enough local difference to authorise the distinction of special subspecies for the Upper Congo forms.

In all, Dr. Christy's collection contains 74 species and subspecies, of which 10 have proved to need description

\* P. Z. S. 1901, i. p. 351.

† Ann. & Mag. N. H. (8) xvi. p. 146 (1915).

as new. Five of these were described in the previous paper.

Dr. Christy's numbers run up to 1530, but the present account only deals with the later two-thirds of the collection, the earlier series having either been already named by Mr. Dollman or else gone elsewhere for determination.

The great majority of the mammals here referred to were obtained at two localities, Medje, on a branch of the Ituri, about 27° 40' E., 2° 20' N., and Poko, some 20 or 30 miles north-west of it, but across the watershed in the Welle basin. The latter is not very far from Emin's locality, Tingasi. The other localities mentioned are mostly in the Aruwimi-Ituri basin.

By the generosity of the authorities at Tervueren, the British Museum has been allowed to retain examples of nearly all the species obtained, including all those described as new. In particular, we have to thank Dr. Schouteden for his kindness both in placing the collection in our hands for determination and for the liberality with which we have been allowed to select duplicates. The sum of these latter forms a very valuable donation to the British Museum.

In normal times this list would have been prepared by Mr. Dollman in continuation of the paper he published in the Tervueren Journal in 1914\*, but he has gone to serve his country, and it is quite impossible for publication to take place in Belgium. With the consent of the Belgian authorities the paper is therefore prepared by me and published in the 'Annals.'

1. *Colobus cottoni*, Lyd.

1219 (young). Poko.

2. *Cercopithecus schmidti*, Matsch.

716, 755. Medje.

900, 1008, 1164, 1165, 1352, 1353. Poko.

3. *Cercopithecus neglectus*, Schl.

1168. Poko.

4. *Hemigalago demidoffi medius*, subsp. n.

737, 750. Medje.

979, 994, 1091, 1214, 1247, 1292, 1359, 1388, 1390, 1397.  
Poko.

\* Rev. Zool. Afr. iv. p. 75 (1914).

Coloration and general characters as in true *demidoffi*, but skull averaging larger.

Size distinctly larger than in *demidoffi*, smaller than in the Ruwenzori and Uganda *thomasi*. General colour above near Prout's brown, but very variable, rarely so bright as in *demidoffi* or so dull as in *thomasi*, but the series shows all stages between the two. Under surface always washed with yellowish, not more or less white as in *poensis*.

Skull larger than in *demidoffi*, about equalling that of *poensis*, smaller than in *thomasi*.

Dimensions of no. 1214, the type, ♂ (taken on the skin):—

Head and body 150 mm.; tail 193; hind foot 50.

Skull: greatest length (occiput to gnathion) 39·3; occiput to tip of nasals 39·3; basal length 31·2; zygomatic breadth 24·3; breadth of brain-case above meatus 20; front of canine to back of  $m^3$  13.

Ordinary mainland western specimens have a greatest skull-length of about 36 to 38 mm., these middle-area examples, as also those from Fernando Po (subsp. *poensis*) about 38–40, while in the Ruwenzori *thomasi* this measurement is 41–42 mm., the general size of the skull varying in proportion.

With regard to Pousargues's *Galago (Hemigalago) anomurus*, from the Ubanghi, the colour as described and figured and the short tail are so different from what is found in any form of the present series, that it is evidently a wholly distinct animal. If by any chance the original skulls, whose measurements nearly agree with those of *H. d. medius*, should prove not to belong to the skins described, the latter would clearly have to be taken as typical, as their characters are those on which the species is mainly founded.

Specimens of this new form were obtained by Emin Pasha in 1884 and the Alexander-Gosling Expedition in 1905–6.

#### 5. *Perodicticus faustus*, Thos.

850. Melje.

893, 957, 958, 1102, 1284, 1293, 1309, 1496. Poko.

#### 6. *Eidolon helvum*, Kerr.

889. Melje.

#### 7. *Epomops franqueti franqueti*, Tomes.

860, 883. Medje, Ituri.

8. *Hipposideros caffer*, Sund.

996, 997, 1078, 1251, 1252, 1296-1300. Poko, Welle.

9. *Nycteris grandis*, Pet.

1351. Poko.

10. *Nycteris hispida*, Schr.

818. Medje.

1311, 1372, 1401. Poko.

11. *Scotophilus nux*, Thos.

739, 740. Medje.

The conspicuous difference between the colour of *S. nux* and that of all forms of *S. nigrita* makes me now think that it should be recognized as a distinct species, and not merely a subspecies of the older known form.

These specimens show no difference from the type, which was collected by Mr. Bates at Efulen, Cameroons.

12. *Otomops martiensseni*, Matsch.

1290. Poko.

Only hitherto known by the type in the Berlin Museum.

As I expected when describing *O. wroughtoni*, this African *Otomops* is quite remarkably similar to its Indian relative. All the important skull-characters marking the genus *Otomops* are quite the same, even to the peculiar vertical plate on the zygomata.

In colour, however, there is quite sufficient difference to leave no doubt that the two forms are specifically distinct.

[Although not a part of the Christy collection, the following interesting bat, being from the same region of the Congo, may be here described. Most unfortunately, it is without the skull, but the structure of its ears and muzzle leave me in little doubt as to its affinities.

These would appear to be with the bat hitherto known as *Eomops whiteleyi*, but Mr. Miller has made out so strong a case for the generic identity of *Eomops* with the far earlier *Myopterus*, Geoff., that I am prepared to accept it until such time as the capture in Senegal of a bat corresponding with Daubenton's description confirms or upsets Mr. Miller's hypothesis.

It should, however, be noted that Gervais's figure of the skull shows no trace of the high and abrupt sagittal crest so well marked in *E. whiteleyi*, and likely to be still more developed in a larger species of the same genus.

*Myopterus albatus*, sp. n.

A large whitish and white-winged species with the upper body-colour arranged in a lineated pattern.

Size large, the forearm about half as long again as in *M. whiteleyi*, and rather larger than that of *M. daubentoni* would be if in the same relative proportion to the skull (that is to say, about twice the length) as in *M. whiteleyi*. Fur soft and fine, hairs of shoulders about  $4\frac{1}{2}$  mm. in length, of lower back  $3\frac{1}{2}$ . Fur not extending at all on the membranes, and stopping on the lower back a little way short of the tail, just as in *M. whiteleyi*. General ground-colour above drabby brown ("dusky drab"), the hairs white at their bases, brown terminally; but on the median area of the nape, from occiput to withers, and along two broad lines running down the back on each side from the withers, the white extends nearly to the tips of the hairs, so as to show through above, and to form broad whitish lines, the brown along the side of the body and that in the middle line from the withers backwards, therefore, appearing as three broad brown longitudinal lines separated by whitish. Fur of whole of under surface pure creamy white, sharply contrasted on the sides of the neck with the brown of the upper surface. Wing-membranes white throughout, except that by the side of the body which is spotted with brown granules, just as in *M. whiteleyi*; inter-femoral membrane brown. Upper surface of forearms, digits, legs, and feet also brown.

Ears apparently similar in structure to those of *M. whiteleyi*, separated in the middle line, their inner keels low and little developed. Tragus short and broad. Nasal septum without a mesial ridge, clothed with fine whitish hairs. Edges of lips with a close mixture of spoon-shaped and normal bristle-hairs. Lips practically without wrinkles. Wings to the distal end of the tibiae.

Dimensions (measured on the skin):—

Forearm 55 mm.

Head and body (probably stretched) 84; tail 40; ear (dry) 19; third finger, metacarpal 54.5, first phalanx 19.5, second phalanx 19.5; fifth finger, metacarpal 35, first phalanx 15; hind foot (c. u.) 13.

*Hab.* R. Welle. Collected by M. Hutereau.

Original number 17. Congo Museum, no. 2911.

The coloration of this beautiful bat is quite unique, but of course it assimilates, in the brown upper and white lower surface, with that of *M. daubentoni* and *whitleyi*.]

13. *Rhynchocyon claudi*, Thos. & Wrought.

789. Medje.

984, 1020, 1021, 1189, 1198, 1199, 1209, 1216, 1227, 1232, 1377, 1409. Poko.

14. *Potamogale velox argens*, subsp. n.

763. Medje.

1206. Poko.

All essential characters as in true *P. velox* of the Lower Congo, Gaboon, &c., but the white of the underside more extended, reaching higher up on the sides, where also the brown hairs are prominently tipped with greyish white. Fore limbs whitish, almost wholly in the whitish area. Sides and under surface of hairy base of tail silvery white, nearly wholly brown in *velox*.

Hind foot of no. 763, the type, 40.5 mm.

Skull: condylo-basal length 66; upper tooth-series 32.3.

15. *Crocidura sururæ*, Hell.

890. Viadama, Welle.

949. Poko.

949 is quite like examples from Wadelai and others from the Alexander-Gosling Expedition determined by Mr. Dollman; 890 is rather darker.

16. *Crocidura poensis attila*, Dollm.

807, 812, 854, 858, 866, 873. Medje, Welle.

17. *Scutisorex congicus*, sp. n.

♂. 840. Medje, Upper Ituri, 17th April, 1914.

Skull smaller than in *S. somereni*, and colour more suffused with buffy.

General appearance and coloration quite as in *S. somereni*, except that the fur is more suffused with buffy or isabella, but even this difference is not unlikely to be individual or sexual. Fur slightly shorter and harsher than in the allied species.

Skull decidedly smaller than in *S. somereni*, the specimen being a male and that of *somereni* a female; the difference is greater than occurs within any of the series of African *Crocidura* recently published by Mr. Dollman. Lambdoid crests not projecting backwards beyond the level of the condyles. Teeth essentially similar, but the last upper unicuspid rather smaller in proportion.

Dimensions (measured in flesh):—

Head and body 143 mm.; tail 77; hind foot 20; ear 10.

Skull: condylo-incisive length 31.3; condylo-basal length 30.2; greatest breadth 13.2; anterior breadth across palate 9.6; palatal length 14; upper tooth-row 13.6; tip of  $i^1$  to tip of  $p^4$  7.2; front of  $p^4$  to back of  $m^2$  6.4 (in *somereni* 7.5); lower tooth-row 12.7.

This shrew differs from its Uganda ally mainly by its smaller size and smaller teeth. The type of *S. somereni* was hitherto the only specimen of the genus known, so that this second example is of much value. The generic characters used to distinguish *Scutisorex* from *Sylvisorex*, in which *somereni* was first placed, are as marked in *S. congicus* as in the typical form, no approximation to *Sylvisorex* being perceptible.

18. *Sylvisorex morio*, Gray.

824 (immature). Medje, Ituri.

19. *Sylvisorex gemmeus irene*, Thos.

809. Medje.

1250. Poko.

This dark form was first obtained by Mr. Robin Kemp in Southern Uganda, but was only distinguished on the arrival of these specimens.

20. *Felis ocreata*, Gmel.

1205, 1440, 1504. Poko.

21. *Civettictis civetta*, L.

814. Medje.

1030, 1063, 1282, 1308, 1523, 1530. Poko.

No. 1530 the only adult, no. 1063 melanoid.

22. *Genetta victoriae*, Thos.

642. Moera.

706. Mawambi.

1575. Peli-Peli, near Stanleyville.

23. *Genetta bettoni*, Thos.

655. Moera.  
741. Medje.  
1104, 1494. Poko.

24. *Genetta stuhlmanni*, Matschr.

742, 801, 888. Medje.  
896, 1055, 1056, 1146, 1147, 1148, 1528. Poko.

25. *Nandinia binotata*, Gray.

745, 865. Medje.  
986, 1025, 1054, 1190, 1203, 1204, 1289, 1525, 1529.  
Poko.

26. *Mungos paludinosus*, G. Cuv.

1166. Poko.

27. *Mungos albicauda*, Cuv.

894, 1202. Poko.

28. *Bdeogale nigripes*, Puch.

684. Zambo.

29. *Crossarchus alexandri*, Thos. & Wr.

504, 704. Mawambi.  
643. Moera.  
1316. Poko.

30. *Crossarchus gothnehi*, Fitz.

917, 987, 1152, 1153. Poko.

31. *Anomalurus jacksoni*, Thos.

648. Moera; Beni  
802, 813. Medje.  
1133, 1222, 1361, 1362, 1389. Poko.

32. *Anomalurus pusillus*, Thos.

628. Moera, Beni.  
747, 751, 822, 874. Medje.  
1158, 1360, 1366, 1395, 1456, 1497, 1498. Poko.



33. *Protoxerus stangeri centricola*, Thos.

594, 624, 647. Moera.  
 660, 693. Alimasi.  
 707, 710. Mawaubi.  
 892, 959, 1001, 1003, 1006, 1157, 1356, 1358, 1422, 1445,  
 1503, 1522, 1532. Poko.

34. *Heliosciurus rufobrachiatus pasha*, Schwann.

551. Irumu.  
 744, 746, 770, 810. Medje.  
 976, 1000, 1004, 1010, 1342, 1345, 1399, 1402, 1417.  
 Poko.

35. *Paraxerus boehmi emini*, Matsch.

♂. 738, 808 ; ♀. 743, 795. Medje.  
 ♂. 708, 709 ; ♀. 702 (young), 705. Mawambi.  
 ♂. 931, 1074, 1151, 1218, 1286, 1291, 1306, 1307 ;  
 ♀. 1271. Poko.

36. *Paraxerus alexandri*, Thos. & Wr.

♂. 754, 790, 833 ; ♀. 794. Medje.  
 ♂. 1376. Poko.  
*Type-locality.* Gudima, R. Iri, Upper Welle.  
 Like *P. boehmi*, this beautiful little squirrel has 1—2=6  
 mammae.

37. *Funisciurus anerythrus*, Thos.

711. Mawambi.  
 726. Avakubi.  
 736, 764, 799, 805, 829, 853. Medje.  
 906, 908, 947, 954, 1007, 1024, 1035, 1228, 1236, 1255,  
 1263, 1283, 1315, 1404, 1419. Poko.

Correspond closely with the two original specimens obtained  
 by Emin Pasha at Buguera.

Examination of these fresh skins has enabled me to dis-  
 criminate *F. a. bandarum*, the form found on the Upper  
 Shari, which had hitherto been referred to *F. anerythrus*.

38. *Funisciurus akka*, de Wint.

766, 768, 846, 847. Medje.  
 961, 977, 1249, 1294, 1357, 1365, 1479. Poko.  
 The type of *F. akka* has more rufous legs than any speci-  
 men of this series ; but a paratype, also from Tingasi, the  
 type-locality, is quite similar to the average of the present set.

39. *Euxerus erythropus lacustris*, Thos.

895, 898, 899. Panga, Poko.

919, 978, 995, 1005, 1081, 1201, 1208, 1524. Poko.

40. *Graphiurus christyi*, Dollm.

803, 870. Medje.

1274. Poko.

41. *Graphiurus lorraineus*, Dollm.

1061, 1162. Poko.

The type of *G. lorraineus* was collected by Capt. Boyd Alexander near the junction of the Welle with the Ubanghi.

42. *Deomys christyi*, Thos.

T. c. p. 150.

950, 968, 990, 1048, 1089, 1134, 1145, 1305. Poko, Welle.

A well-marked eastern representative of the *D. ferrugineus* of the Lower Congo, and one of the most striking new species discovered by Dr. Christy.

43. *Dendromus messorius*, Thos.

787, 804. Medje.

891. Viadama.

1239, 1286. Poko.

Quite similar both in skin and skull to typical examples from the Cameroons.

"Banana-mouse" (*Christy*).

44. *Tatera dichrura*, Thos.

T. c. p. 147.

945, 955, 964, 969, 971, 975, 980, 1011, 1027, 1028, 1036, 1037, 1049, 1057, 1058, 1064, 1065, 1075, 1084, 1212, 1224, 1244, 1304, 1435, 1444, 1453, 1455, 1460, 1514, 1517, 1519. Poko, Welle.

A large species of the *T. liodon* group.

45. *Taterillus congicus*, Thos.

T. c. p. 147.

916, 918, 940, 993, 998, 1009, 1043, 1047, 1053, 1055, 1070, 1076, 1079, 1080, 1093, 1094, 1105, 1139, 1188, 1238, 1242, 1243, 1287, 1303, 1448, 1449, 1454. Poko.

46. *Cricetomys gambianus emini*, Wrought.

757, 758, 765, 769, 826. Medje.

960, 1059, 1060, 1062, 1103, 1141, 1220, 1314, 1393, 1403, 1492, 1493, 1512. Poko.

47. *Cricetomys gambianus dichrurus*, Osg.

897. Panga, Welle.

The close agreement of this specimen, as of the pair from the same region mentioned by Mr. Osgood, with the type of *dichrurus* is very marked.

Possibly this greyish form is really a race of *C. ansorgei*, but I provisionally accept Mr. Osgood's name for it.

48. *Lophuromys ansorgei*, de Wint.

861. Medje.

914, 920, 952, 1144, 1270, 1341, 1473, 1510. Poko.

Reddish below, as in Heller's "*L. pyrrhus*," but this is also the case in specimens from Mt. Elgon, near the type-locality of *ansorgei*.

49. *Lophuromys aquilus*, True.

755, 827, 868. Medje.

1320, 1333, 1368, 1400, 1474. Poko.

I provisionally put these specimens under the same name as that which Wroughton and I used in the Ruwenzori Report for the common speckled *Lophuromys*. A considerable number of names have, however, been added in this group, but the characters are so slight, and in every locality there is so great a range of variation both in colour and skull, that I think many of them will ultimately prove to be untenable.

50. *Colomys goslingi*, Thos. & Wrought.

876, 884, 885. Medje.

991, 1039, 1051, 1100, 1101, 1131, 1156, 1310, 1318.

Poko.

This remarkable Murine, previously only known by the type collected by the late Capt. G. B. Gosling at Gambi on the Welle, attracted Dr. Christy's attention very much by its peculiar habits. He says that it lives constantly at the water's edge, where its elongated feet enable it to wade about on the stones, and that it feeds on small water crustaceans and insects, not on vegetable matter.

51. *Enomys hypoxanthus*, Puch.

756, 760, 789, 806, 821, 841. Medje.

1040, 1135, 1229, 1230, 1321, 1458, 1470, 1471, 1472.  
Poko.

The majority of the specimens agree absolutely with Cameroons and Gaboon examples of *hypoxanthus*, and have teeth of the same comparatively large size; but in some the teeth are rather smaller, and it is possible that these are referable to the Uganda *Æ. bacchante*. There is, however, so much variation both in colour and skull-characters in this genus that it is not possible to identify every specimen satisfactorily without more material and prolonged study.

52. *Thamnomys rutilans centralis*, Dollm.

752, 762, 781, 782, 792, 834, 855, 856. Medje.

1041, 1067, 1071, 1087, 1106, 1130, 1132, 1350, 1372,  
1374, 1375, 1378, 1380, 1383, 1386, 1387, 1391, 1392, 1411,  
1412, 1413, 1481. Poko.

Although I use the above name as being unquestionably applicable to these specimens, there is so much variation among them in the size of the skull and teeth that they may possibly prove to grade into the earlier *Thamnomys kuru*, Thos. & Wr., whose distinction from *Th. rutilans* mainly consists in its smaller size. The type of *Th. kuru* was from Gambi, Mobatti country, and that of *centralis* from Fundi.

53. *Thamnomys venustus*, Thos.

♂. 830. Medje.

Only hitherto known from the type, which is slightly larger, but the difference does not exceed that found among the series of *Th. rutilans*. The long parallel-sided palatal foramina and the grey-based chest-hairs are very characteristic. *Th. kempfi*, Dollm., also belongs to the same group.

54. *Grammomys macmillani*, Wrought.

1457. Poko.

55. *Malacomys centralis*, de Wint.

783, 786, 875, 877, 878. Medje.

951, 956, 962, 1015, 1019, 1068, 1072, 1086, 1107, 1128,  
1238, 1319, 1334, 1335, 1337, 1338, 1339, 1379, 1381, 1382,  
1383. Poko.Type from Tingasi (*Emin Pasha*).

56. *Epimys* (*Æthomys*, subgen. nov.) *kaiseri*, Noack.

922, 932, 933, 934, 939, 948, 953, 965, 966, 967, 981, 982, 985, 992, 1016, 1022, 1029, 1042, 1045, 1052, 1083, 1096, 1108, 1109, 1137, 1187, 1197, 1215, 1217, 1246, 1257, 1425, 1427, 1436, 1441, 1442, 1446, 1447, 1451, 1459, 1520. Poko, Welle.

These may represent Heller's *E. k. centralis*, if really distinct from the older known forms.

In working out this series of African *Epimys*, I come, not for the first time, to the conclusion that the classification of these difficult animals would be advanced if certain of the "groups" were given subgeneric names. Detailed characters will need much further material and study, but the most obvious characters of the subgenera lying in their mammary formulæ, I may give the following preliminary synopsis:—

- A. Mamma less than 14, separated into pectoral and inguinal sets.
- a. Inguinal mammæ 3 pairs.  
Mammæ 2—3 or 3—3=10 or 12 . . . . . *Epimys*, s. s.
- b. Inguinal mammæ 2 pairs.
- a<sup>2</sup>. Pectoral mammæ 2 pairs or less.
- a<sup>3</sup>. Size large; form heavy; mammæ  
0—2=4 or 1—2=6 . . . . . *Æthomys*\*, subg. n.
- b<sup>3</sup>. Size small; form delicate and mouse-like; mammæ 1—2=6 or 2—2=8 . . . . . *Praomys*, subg. n.
- b<sup>2</sup>. Mammæ 3—2=10 . . . . . *Myomys*†, subg. n.
- B. Mammæ more than 14, in continuous series . . . . . *Mastomys*, subg. n.

The type of *Æthomys* would be *Epimys hindei*, Thos., of *Praomys E. tullbergi*, Thos., of *Myomys E. colonus*, Smith, and of *Mastomys E. coucha*, Smith.

I hope to give later more detailed characters of these subgenera, with lists of the species that fall into them.

57. *Epimys* (*Æthomys*) *longicaudatus ituricus*, Thos.

*T. c.* p. 149.

759, 767, 848, 849, 857, 869. Medje.

970, 1013, 1017, 1031, 1129. Poko.

As already stated, this rat is distinguished from true *E. longicaudatus*, better known as *E. sebastianus*, by its greyish flanks and whitish lower side of tail.

\* From *αἰθός*, the basis of the word Ethiopian.

† Mammary formula the same as in true *Mus*.

58. *Epimys (Praomys) tullbergi*, Thos.

702. Mawambi.

748, 749, 791, 796, 811, 815, 820, 823, 825, 828, 837, 839, 862, 863, 882, 886. Medje.

937, 989, 1018, 1088, 1136, 1140, 1149, 1150, 1155, 1261, 1340, 1466, 1467, 1468, 1469. Poko.

59. *Epimys (Praomys) stella*, Thos.

752, 836, 845, 864, 871, 879, 880, 887. Medje, Ituri.

1127. Poko, Welle.

60. *Epimys (Mastomys) coucha*, Smith.

723. Bosabangi.

761. Medje.

904. Panga.

907, 942, 983, 1033, 1044, 1050, 1066, 1077, 1143, 1200, 1226, 1258, 1259, 1260, 1262, 1268, 1269, 1279, 1280, 1281, 1285, 1369, 1370, 1408, 1416, 1424, 1452, 1465, 1483-1490, 1513, 1516, 1518, 1521. Poko.

Common in houses of natives.

61. *Mus pasha*, Thos.

910. Panga, Welle.

909, 912, 936, 941, 973, 974, 1002, 1014, 1421. Poko.

This distinct species having been only hitherto known by the single imperfect specimen sent home by Emin Pasha, the present fine series is very acceptable.

I may note that by some accident the measurement of the upper molar series was given as 4 mm. in the original description. Its true measurement is 3.7 mm.

The dimensions of one of Dr. Christy's specimens are as follows:—

Head and body 75 mm. ; tail 50 ; hind foot 15 ; ear 11.

Skull : greatest length 21.2 ; condylo-incisive length 20 ; upper molar series 3.7.

62. *Mus bellus*, Thos.

793, 803, 831, 852, 867, 881. Medje.

1023, 1480. Poko.

63. *Hybomys univittatus*, Pet.

725. Avakubi.

771, 835, 838. Medje.

913, 972, 1032, 1046, 1069, 1072. Poko.

As usual, very variable in size and colour.

64. *Mylomys alberti*, Thos.

T. c. p. 148.

♂. 1231; ♀. 1237. Poko, Welle.

A most handsome species. Named after His Majesty the King of the Belgians.

Owing to the original label having fallen off, the measurements in my description were taken from the skin. Now, however, the label has been found, and the flesh-measurements taken by Dr. Christy may be recorded as follows:— Head and body 180 mm.; tail 165; hind foot 36; ear 21.

65. *Arvicanthis striatus*, L.

724. Bosabangi.

905. Panga.

921, 938, 946, 1322, 1323, 1333, 1336, 1384, 1414, 1415, 1461, 1462, 1464, 1475, 1476, 1477, 1478, 1511. Poko.

Allowing for their variation in colour according to freshness of fur, there seems remarkably little difference between these specimens and the E.-African *A. massaicus*, on the one hand, and true W.-African *A. striatus*, including *A. pulchellus*, on the other.

66. *Arvicanthis micropus*, Hell.

911, 1463. Poko.

Described by Heller as a subspecies of *A. pulchellus*; but, as that species (i. e., *A. striatus*) is abundantly represented at Poko, this reference would seem to be incorrect. Intermediate in size between *A. striatus* and *A. macculus*.

67. *Arvicanthis macculus akka*, subsp. n.

943. Poko. (Type a specimen obtained by Emin Pasha.)

General characters as in true *macculus* of Ruwenzori and Uganda, but the general greyish colour strongly suffused with cinnamon and the intermediate dorsal light stripes much

less conspicuous. A well-marked buffy line over each eye. Crown grizzled greyish cinnamon. Ground-colour of back buffy or cinnamon greyish as compared with the clear greyish of true *macculus*.

Flesh-measurements of no. 943.

Head and body 100 mm.; tail 95; hind foot 21; ear 16.

Hind foot of type 20.5.

Skull: greatest length 27.5; condylo-incisive length 24.5; zygomatic breadth 12.3; breadth of brain-case 12; palatal foramina 5.5; upper molar series (crowns) 4.5.

*Hab.* Welle area. Type from Tingasi, Bomakandi River.

*Type.* Male. B.M. no. 87. 12. 1. 67. Collected 30th September, 1883, and presented by Emin Pasha.

Compared with seven specimens of *A. macculus* taken at different places and seasons, these Welle examples differ by their general cinnamon coloration. Dr. Christy's modern specimen is quite similar to that obtained by Emin Pasha in 1883 on the same affluent of the Welle.

#### 68. *Dasymys bentleyæ*, Thos.

800. Medje, Ituri.

935, 999, 1012, 1038, 1092, 1125, 1126, 1127, 1213, 1235, 1245, 1255, 1256, 1301, 1302. Poko, Welle.

These specimens, taken as a series, are intermediate between *D. bentleyæ* of the Lower Congo and *D. medius* of Ruwenzori. The majority are as large as the latter (one or two are even larger), while, on the other hand, several are fully as small as the type of *D. bentleyæ* and have equally small bullæ. But in this latter character there is, as usual, considerable variability.

Swamp and river-side animals such as *Dasymys* are not very likely to have distinctive geographical races in so uniformly waterlogged a country as the Congo area.

#### 69. *Zelotomys instans*, sp. n.

♀. 1026. Poko, Welle. 20th June, 1914.

A Congo representative of the East-African *Z. hildegardeæ*.

Size about as in *hildegardeæ*. Fur rather shorter and crisper. General colour above slaty greyish, without the drab suffusion characteristic of *hildegardeæ*. Median line blackish slaty, sides clearer greyish. Under surface slaty grey washed with whitish, the slaty bases of the hairs showing through. Cheeks and throat not so markedly white as in



the allied species. Hands and feet white. Tail almost naked, finely speckled with brown as in the darker-tailed individuals of *Z. hildegardæ*. Mammæ 3—2=10, as is also the case in *Z. hildegardæ*.

Skull of about the same size as in *hildegardæ*. Zygomata rather more widely and evenly spaced, their widest point opposite the posterior molars instead of further back. Bullæ slightly larger.

Incisors longer and more strongly thrown forward, the general line of the exposed portion directed forwards instead of being vertical. Molars decidedly larger and heavier.

Dimensions of the type (measured in the flesh):—

Head and body 133 mm.; tail 88; hind foot 22; ear 16.

Skull: greatest length (bone only) 30·8; condylo-incisive length (increased by forward direction of incisors) 31·2; zygomatic breadth 17·3; nasals 12; interorbital breadth 4·8; palatilar length 15; diastema 9; palatal foramina 7·4; upper molar series (crowns) 5·9.

This rat is readily distinguishable from its East-African ally, hitherto the only known species of the genus, by its greyer and less drabby colour, more projecting incisors, and larger molars.

70. *Thryonomys harrisoni*, Thos. & Wrought.

1210, 1211, 1531. Poko.

71. *Atherurus centralis*, Thos.

1312, 1313, 1343, 1346, 1353, 1364, 1396, 1398, 1406, 1499, 1500. Poko.

72. *Manis gigantea*, Ill.

687. Zambo.

73. *Manis macroura*, Erxl.

(No number.) Poko.

74. *Manis tricuspis*, Raf.

713, 832, 843. Medje.

1142, 1207, 1443, 1495, 1501. Poko.